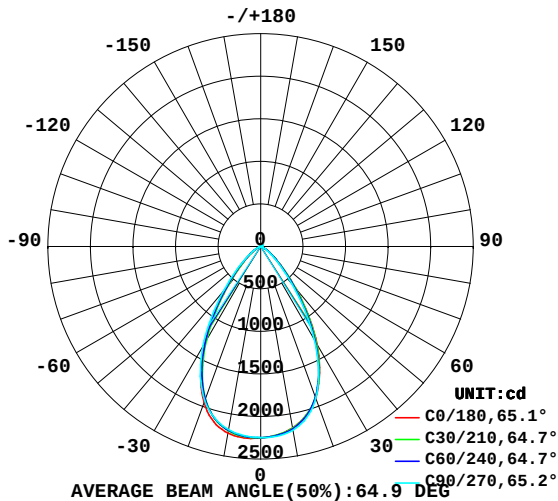


LUMINAIRE PHOTOMETRIC TEST REPORT

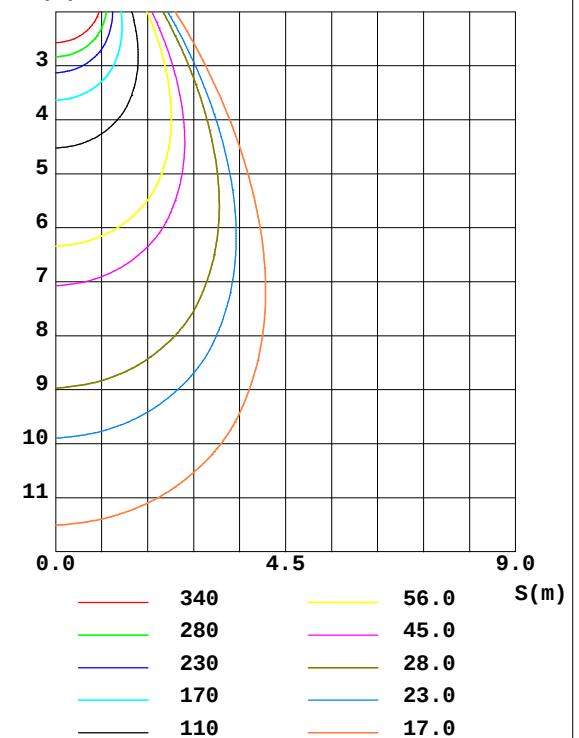
Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 97.22 lm/W
MODEL	PS-TL30W40KD6080RA-D	I _{max} (cd)	2259	S/MH(C0/180)	0.97	
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	0.95	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	2702.7	η UP, DN(C0-180)	1.7, 46.7	
NOMINAL FLUX(lm)	2702.67	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.7, 50.0	
LAMPS INSIDE	1	η up(%)	3.4	CIBSE SHR NOM	1.00	
TEST VOLTAGE(V)	220.6	η down(%)	96.6	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2165	2171	2191	2200	2227	2197	2185	2184	0- 10	212.0	212.0	7.84,7.84
20	1895	1885	1895	1887	1947	1907	1925	1962	10- 20	584.3	796.3	29.5,29.5
30	1325	1297	1262	1211	1314	1293	1362	1433	20- 30	747.8	1544	57.1,57.1
40	640.5	622.1	573.1	516.4	591.8	606.9	675.9	738.0	30- 40	589.8	2134	79,79
50	233.6	232.1	205.7	179.5	216.0	228.4	254.0	277.1	40- 50	302.6	2436	90.2,90.2
60	78.16	77.89	65.30	56.48	75.40	78.68	86.69	95.66	50- 60	125.3	2562	94.8,94.8
70	13.74	13.03	9.944	8.699	14.86	14.95	16.75	20.84	60- 70	38.87	2601	96.2,96.2
80	2.244	2.308	2.209	2.157	4.931	5.045	5.098	5.110	70- 80	6.974	2608	96.5,96.5
90	3.000	3.096	3.307	3.421	5.610	5.591	5.451	5.304	80- 90	4.178	2612	96.6,96.6
100	5.243	5.364	5.672	5.855	7.218	7.164	6.966	6.759	90-100	5.722	2618	96.9,96.9
110	8.440	8.574	8.936	9.181	9.439	9.348	9.089	8.839	100-110	7.997	2626	97.1,97.1
120	12.39	12.49	12.87	13.22	12.48	12.37	12.01	11.71	110-120	10.55	2636	97.5,97.5
130	17.32	17.33	17.60	18.14	16.55	16.36	15.89	15.57	120-130	13.03	2649	98,98
140	22.52	22.40	22.57	23.10	21.20	20.84	20.31	20.10	130-140	14.84	2664	98.6,98.6
150	26.93	26.66	26.72	26.90	25.25	24.85	24.53	24.33	140-150	14.89	2679	99.1,99.1
160	29.61	29.27	29.20	29.05	28.10	27.52	27.37	27.22	150-160	12.54	2691	99.6,99.6
170	31.66	31.13	30.90	30.88	30.66	29.81	29.51	29.44	160-170	8.297	2700	99.9,99.9
180	32.89	32.00	31.61	31.70	32.06	32.01	31.58	31.71	170-180	2.968	2703	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

WEC AND CCEC

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE:LED	
MFR.:		

ρ_{CC}	80%			70%			50%			30%			10%			0	
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.200	.113	.036	.192	.109	.035	.177	.102	.032	.164	.094	.030	.151	.088	.028		
2.0	.193	.106	.032	.186	.102	.032	.173	.096	.030	.162	.091	.028	.151	.085	.027		
3.0	.184	.098	.029	.178	.095	.029	.167	.091	.028	.157	.086	.026	.147	.082	.025		
4.0	.175	.091	.027	.170	.089	.026	.160	.085	.025	.151	.081	.024	.143	.078	.024		
5.0	.166	.085	.025	.162	.083	.024	.153	.080	.023	.145	.077	.023	.138	.074	.022		
6.0	.158	.079	.023	.154	.078	.022	.146	.075	.022	.139	.072	.021	.133	.070	.021		
7.0	.150	.074	.021	.147	.073	.021	.140	.071	.020	.134	.068	.020	.128	.066	.019		
8.0	.143	.070	.020	.140	.069	.019	.134	.067	.019	.128	.065	.019	.123	.063	.018		
9.0	.137	.066	.018	.134	.065	.018	.128	.063	.018	.123	.062	.018	.118	.060	.017		
10.0	.131	.063	.017	.128	.062	.017	.123	.060	.017	.118	.059	.017	.113	.057	.016		

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.216	.216	.216	.185	.185	.185	.126	.126	.126	.072	.072	.072	.023	.023	.023	
1.0	.199	.183	.169	.170	.157	.145	.116	.108	.101	.067	.063	.058	.021	.020	.019	
2.0	.185	.158	.136	.158	.136	.118	.109	.094	.082	.063	.055	.048	.020	.018	.016	
3.0	.174	.140	.113	.149	.121	.098	.102	.084	.068	.059	.049	.040	.019	.016	.013	
4.0	.165	.126	.096	.141	.109	.083	.097	.076	.059	.056	.044	.035	.018	.014	.011	
5.0	.157	.114	.083	.135	.099	.072	.093	.069	.051	.054	.041	.030	.017	.013	.010	
6.0	.150	.105	.074	.129	.091	.064	.089	.064	.045	.052	.038	.027	.017	.012	.009	
7.0	.144	.098	.066	.124	.085	.058	.085	.060	.041	.050	.035	.024	.016	.012	.008	
8.0	.138	.092	.061	.119	.080	.053	.082	.056	.038	.048	.033	.022	.015	.011	.007	
9.0	.133	.087	.056	.115	.076	.049	.079	.053	.035	.046	.031	.021	.015	.010	.007	
10.0	.128	.083	.053	.111	.072	.046	.077	.051	.033	.045	.030	.019	.015	.010	.006	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

Uncorrected UGR Table

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm										
NAME: PS-TL30W40KD6080RA-D					TYPE:LED					
MFR.:										
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	24.4	25.4	24.6	25.6	25.9	23.9	24.9	24.2	25.2	25.4
3H	24.2	25.2	24.6	25.5	25.7	23.7	24.7	24.1	25.0	25.2
4H	24.1	25.0	24.5	25.3	25.6	23.6	24.5	24.0	24.8	25.1
6H	24.0	24.9	24.4	25.2	25.5	23.5	24.4	23.9	24.7	25.0
8H	24.0	24.8	24.4	25.1	25.5	23.5	24.3	23.9	24.6	25.0
12H	23.9	24.7	24.3	25.1	25.4	23.4	24.2	23.8	24.6	24.9
4H 2H	24.2	25.1	24.5	25.4	25.7	23.7	24.6	24.1	24.9	25.2
3H	24.1	24.9	24.5	25.2	25.5	23.6	24.4	24.0	24.7	25.1
4H	24.0	24.7	24.4	25.0	25.4	23.5	24.2	23.9	24.6	24.9
6H	23.9	24.5	24.3	24.9	25.3	23.4	24.0	23.8	24.4	24.8
8H	23.8	24.4	24.3	24.8	25.3	23.4	23.9	23.8	24.3	24.8
12H	23.8	24.3	24.3	24.7	25.2	23.3	23.8	23.8	24.3	24.7
8H 4H	23.8	24.4	24.3	24.8	25.3	23.4	23.9	23.8	24.3	24.8
6H	23.7	24.2	24.2	24.6	25.1	23.3	23.7	23.7	24.2	24.7
8H	23.7	24.1	24.2	24.6	25.1	23.2	23.6	23.7	24.1	24.6
12H	23.6	24.0	24.2	24.5	25.0	23.2	23.5	23.7	24.0	24.5
12H 4H	23.8	24.3	24.2	24.7	25.2	23.3	23.8	23.8	24.2	24.7
6H	23.7	24.1	24.2	24.6	25.1	23.2	23.6	23.7	24.1	24.6
8H	23.6	24.0	24.1	24.5	25.0	23.1	23.5	23.7	24.0	24.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.0 / - 4.6					+ 2.0 / - 4.8				
1.5H	+ 3.0 / - 3.0					+ 2.8 / - 2.9				
2.0H	+ 4.0 / - 4.7					+ 3.8 / - 4.9				

CIE Pub.117 Corrected 2703 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.5)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		

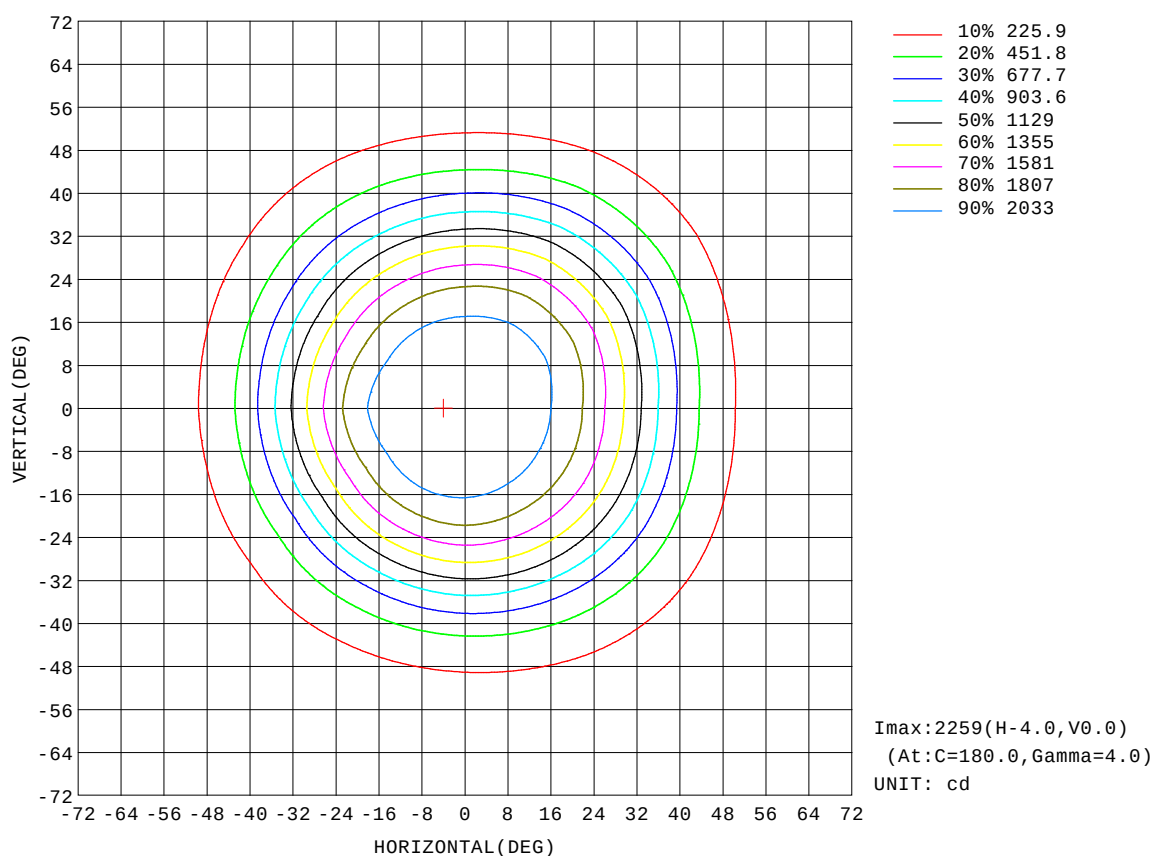
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	66	77	70	66	76	70	65	61
0.80	87	79	75	86	79	75	84	78	74	69
1.00	93	86	81	92	85	81	90	85	80	75
1.25	98	91	87	96	91	87	94	89	85	80
1.50	101	95	91	100	94	90	97	92	89	83
2.00	105	100	96	103	99	95	100	96	93	87
2.50	107	102	99	105	101	98	101	98	95	88
3.00	109	105	102	107	103	100	103	100	98	90
4.00	111	108	105	109	106	103	105	102	100	92
5.00	113	110	107	110	108	106	106	104	102	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		

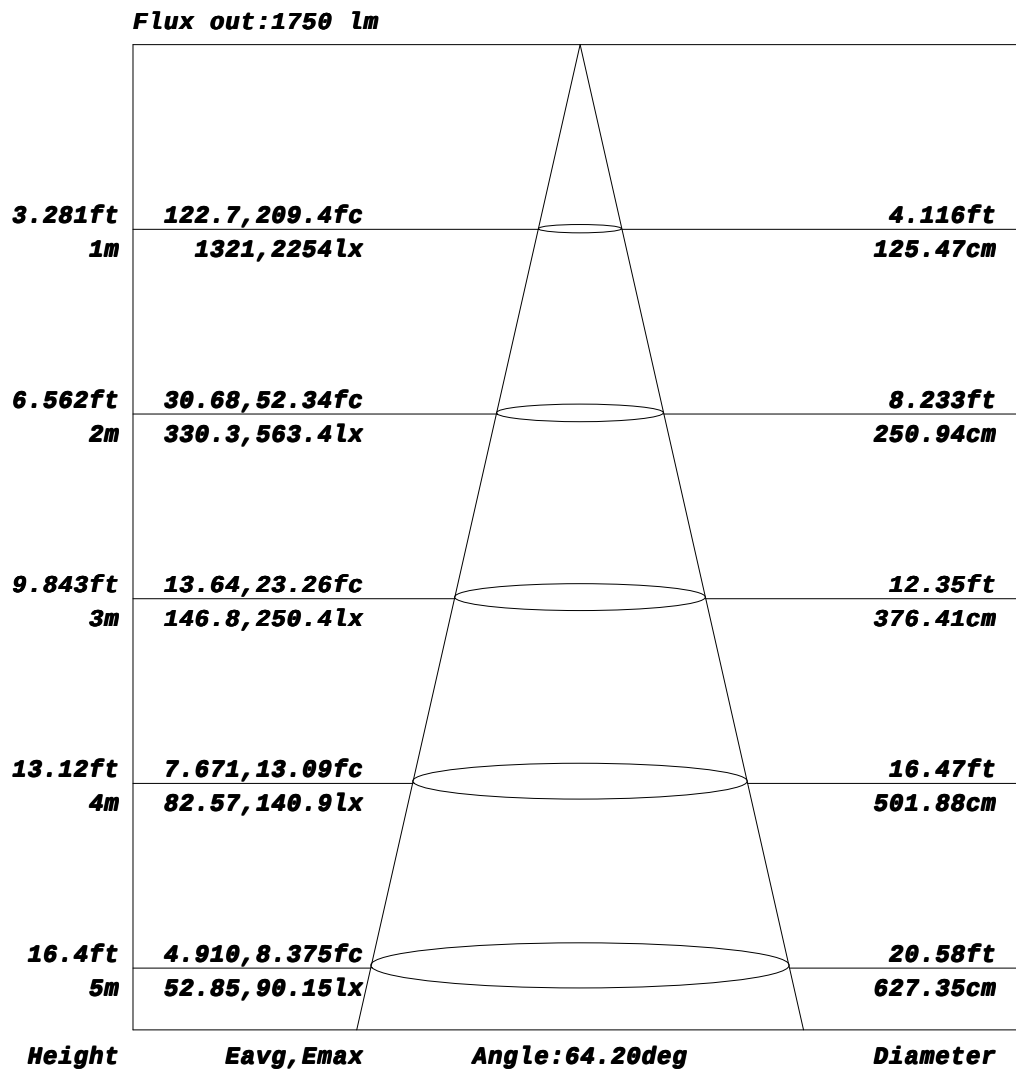


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		



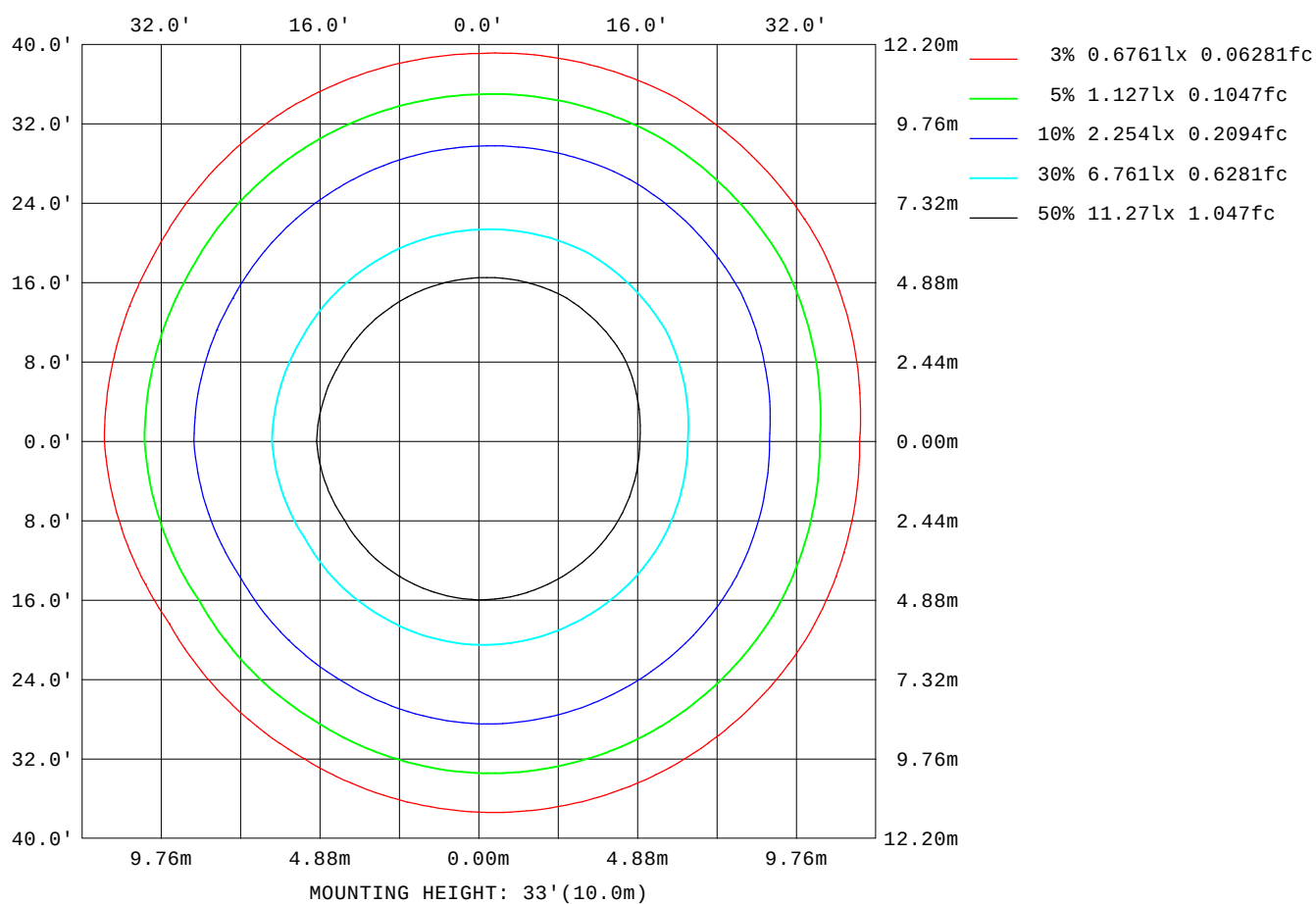
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

ISOLUX DIAGRAM

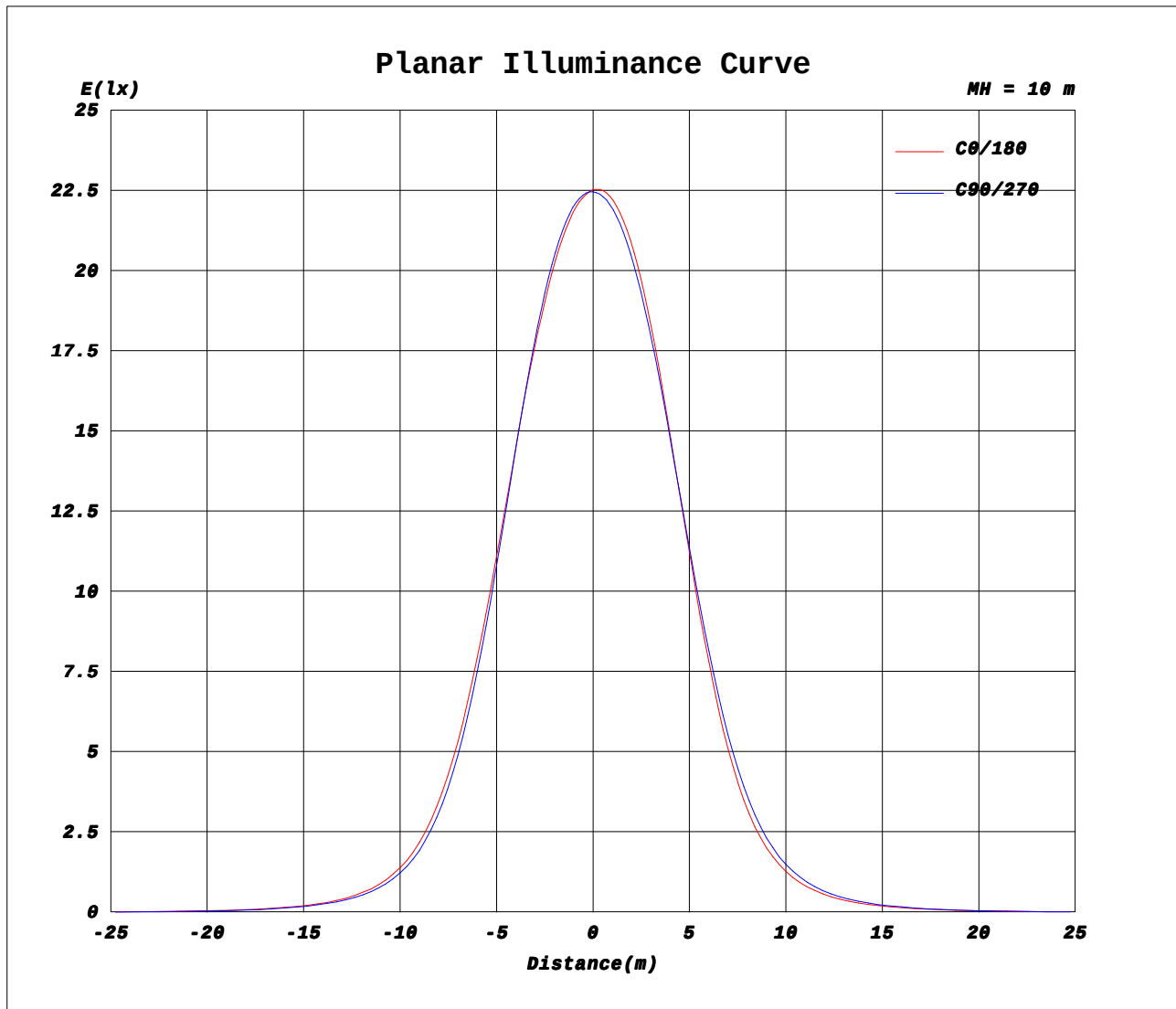
Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.6V I:0.1300A P:27.80W PF:0.9650 Lamp Flux:2702.67x1 lm		
NAME: PS-TL30W40KD6080RA-D	TYPE: LED	
MFR.:		

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	2252	2249	2247	2246	2244	2241	2252	2249	2247	2246	2244	2241						
5	2225	2223	2230	2238	2242	2241	2258	2245	2238	2232	2230	2222						
10	2165	2166	2176	2191	2200	2200	2227	2201	2193	2185	2189	2178						
15	2058	2056	2066	2086	2096	2092	2135	2097	2092	2090	2106	2094						
20	1895	1884	1885	1895	1889	1884	1947	1903	1911	1925	1964	1959						
25	1641	1634	1616	1613	1590	1577	1669	1628	1640	1682	1734	1733						
30	1325	1315	1280	1262	1217	1205	1314	1278	1308	1362	1434	1432						
35	968	963	919	892	834	823	928	908	947	1007	1089	1084						
40	641	640	604	573	522	510	592	589	625	676	739	737						
45	393	396	374	346	312	302	360	361	395	421	466	457						
50	234	238	226	206	182	177	216	216	241	254	281	273						
55	137	142	133	122	107	104	127	130	143	151	164	162						
60	78.2	81.7	74.0	65.3	56.3	56.7	75.4	75.1	82.3	86.7	95.6	95.7						
65	37.8	38.8	33.4	27.9	24.1	25.1	37.2	36.5	40.0	42.9	49.2	50.5						
70	13.7	14.0	12.0	9.94	8.44	8.96	14.9	14.3	15.6	16.7	20.1	21.6						
75	3.89	4.51	3.25	2.78	2.55	2.53	6.05	6.07	6.65	6.98	8.39	9.09						
80	2.24	2.33	2.29	2.21	2.16	2.16	4.93	4.98	5.11	5.10	5.13	5.09						
85	2.35	2.36	2.47	2.55	2.64	2.60	5.09	5.11	5.06	4.98	4.91	4.88						
90	3.00	3.03	3.17	3.31	3.43	3.41	5.61	5.64	5.55	5.45	5.32	5.29						
95	3.99	4.01	4.20	4.37	4.54	4.49	6.35	6.36	6.25	6.12	5.96	5.93						
100	5.24	5.26	5.47	5.67	5.88	5.83	7.22	7.23	7.10	6.97	6.77	6.75						
105	6.74	6.74	6.98	7.20	7.44	7.40	8.25	8.25	8.10	7.95	7.75	7.71						
110	8.44	8.46	8.68	8.94	9.19	9.17	9.44	9.44	9.26	9.09	8.85	8.82						
115	10.3	10.4	10.6	10.8	11.1	11.1	10.9	10.8	10.6	10.4	10.2	10.1						
120	12.4	12.4	12.6	12.9	13.2	13.2	12.5	12.5	12.3	12.0	11.7	11.7						
125	14.7	14.7	14.9	15.1	15.6	15.6	14.4	14.4	14.1	13.8	13.5	13.5						
130	17.3	17.2	17.5	17.6	18.1	18.2	16.5	16.5	16.2	15.9	15.6	15.6						
135	19.9	19.8	20.0	20.1	20.6	20.8	18.9	18.8	18.4	18.1	17.7	17.8						
140	22.5	22.4	22.4	22.6	23.0	23.2	21.2	21.0	20.6	20.3	20.0	20.2						
145	24.9	24.8	24.6	24.8	25.1	25.3	23.4	23.2	22.8	22.6	22.2	22.4						
150	26.9	26.8	26.6	26.7	26.8	27.0	25.3	25.0	24.7	24.5	24.2	24.4						
155	28.5	28.3	28.0	28.1	28.1	28.1	26.8	26.4	26.2	26.2	25.9	26.1						
160	29.6	29.4	29.1	29.2	29.1	29.0	28.1	27.6	27.5	27.4	27.1	27.3						
165	30.6	30.3	30.0	30.1	30.0	29.9	29.4	28.7	28.5	28.4	28.2	28.4						
170	31.7	31.3	31.0	30.9	30.9	30.9	30.7	29.9	29.7	29.5	29.3	29.5						
175	32.7	32.2	31.7	31.6	31.5	31.7	31.9	31.2	30.8	30.6	30.5	30.8						
180	32.9	32.2	31.8	31.6	31.5	31.9	33.0	32.2	31.8	31.6	31.6	31.8						

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks: